



**METHOD FOR THE COMPENSATION OF INTERFERENCE IN A SIGNAL
GENERATED BY DISCRETE MULTITONE MODULATION, AND CIRCUIT
ARRANGEMENT FOR CARRYING OUT THE METHOD**

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FIELD OF INVENTION

The invention relates to a method for the compensation of interference in a signal generated by discrete multitone modulation.

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BACKGROUND

Discrete multitone modulation (DMT) - also called multicarrier modulation - is a modulation method which is suitable in particular for the transmission of data via channels effecting linear distortion. Compared with a so-called single-carrier method - for example amplitude modulation - which has only one carrier frequency, a multiplicity of carrier frequencies are used in discrete multitone modulation. Each individual carrier frequency is modulated in amplitude and phase according to the quadrature amplitude modulation (QAM). A multiplicity of QAM-modulated signals are thus obtained. In this case, a specific number of bits can be transmitted per carrier frequency. Discrete multitone modulation is used for example for digital audio broadcasting DAB under the designation OFDM (Orthogonal Frequency Division Multiplex) and for the transmission of data via telephone lines under the designation ADSL (Asymmetric Digital Subscriber Line).

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In ADSL, the physical transmission channel is a two-wire line (copper double core) of the telephone network. However, such a transmission channel has a long transient recovery time. Signals generated by discrete multitone modulation typically contain very short pulses having a high amplitude, which effect impulse responses that decay slowly in this transmission channel. If an impulse response has still